

ECONOMIC INTELLIGENCE COMMITTEE
Subcommittee on Petroleum

MILITARY CONSUMPTION OF PETROLEUM PRODUCTS

SINO-SOVIET BLOC

1960-61

EIC-PSC-WP 4

(Limited Distribution)

Army Declass/Release Instructions on File

1 April 1962

DOCUMENT NO. 1
NO CHANGE IN CLASS. 1
11 DECLASSIFIED
CLASS. CHANGED TO: TS S C
NEXT REVIEW DATE: _____
AUTH: HR 70-2
DATE: _____ REVIEWER: _____

S-E-C-R-E-T

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S-E-C-R-E-T

FOREWORD

This report provides estimates of the consumption of petroleum products by the military services of the countries of the Sino-Soviet Bloc for the years 1960 and 1961. Previous reports have covered the years 1950-55 (EIC-PSC-WP 1, 1 April 1956), 1956-57 (EIC-PSC-WP 2, 1 March 1958), and 1958-59 (EIC-PSC-WP 3, 1 March 1960). No attempt has been made to revise the estimates contained in these earlier reports.

In this report, as in EIC-PSC-WP 3, the estimates of consumption of petroleum products by Naval Air Forces of the Sino-Soviet Bloc have been included under Appendix B, Naval Forces. In previous reports, EIC-PSC-WP 1 and EIC-PSC-WP 2, such estimates have been included under Appendix C, Air Forces. Thus, current estimates and estimates given in EIC-PSC-WP 3 for the Naval and Air Forces are not strictly comparable with those given in EIC-PSC-WP 1 and EIC-PSC-WP 2.

The report was prepared under the sponsorship of the Economic Intelligence Committee Subcommittee on Petroleum to meet a designated research deficiency. It is intended that the report serve members of the intelligence community in the preparation of petroleum supply/demand studies concerning the countries of the Sino-Soviet Bloc.

- 1 -

S-E-C-R-E-T

CONTENTS

Page

I. Introduction	1
II. Estimates of Consumption	1

Appendices

Appendix A. Consumption of Petroleum Products by the Ground Forces of the Sino-Soviet Bloc	4
Appendix B. Consumption of Petroleum Products by the Naval Forces of the Sino-Soviet Bloc	13
Appendix C. Consumption of Petroleum Products by the Air Forces of the Sino-Soviet Bloc	16

Tables

1. Estimated Consumption of Petroleum Products by the Military Forces of the Sino-Soviet Bloc, by Force and by Country, 1960-61	2
2. Estimated Consumption of Petroleum Products by the Military Forces of the Sino-Soviet Bloc, by Country and by Type of Product 1960-61	3
A-1. Estimated Consumption of Petroleum Products by the Ground Forces of the Soviet Army, 1960-61	4
A-2. Estimated Consumption of Petroleum Products by the Ground Forces of the Soviet Army, by Type of Unit, 1960	5
A-3. Estimated Consumption of Petroleum Products by the Ground Forces of the Soviet Army, by Type of Unit, 1961	6
A-4. Estimated Consumption of Motor Gasoline by the Ground Forces of the Soviet Army, by Type of Unit, 1960	7
A-5. Estimated Consumption of Motor Gasoline by the Ground Forces of the Soviet Army, by Type of Unit, 1961	8
A-6. Estimated Consumption of Diesel Fuel by the Ground Forces of the Soviet Army, by Type of Unit, 1960	9
A-7. Estimated Consumption of Diesel Fuel by the Ground Forces of the Soviet Army, by Type of Unit, 1961	10
A-8. Estimated Consumption of Petroleum Products by the Ground Forces of the European Satellites, by Country and by Type of Product, 1960-61	11
A-9. Estimated Consumption of Petroleum Products by the Ground Forces of Communist China and the Asiatic Satellites, by Country and by Type of Product, 1960-61	12
B-1. Estimated Consumption of Petroleum Products by the Naval Forces of the USSR and the European Satellites, by Country and by Type of Product, 1960-61	13

- ii -

S-E-C-R-E-T

Tables (continued)

	<u>Page</u>
B-2. Estimated Consumption of Petroleum Products by the Naval Forces of Communist China, North Korea, and North Vietnam, by Country and by Type of Product, 1960-61	15
C-1. Estimated Consumption of Petroleum Products by the Air Forces of the USSR, according to Description and Location of Unit and by Type of Product, 1960	16
C-2. Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites, by Country, by Unit, and by Type of Product, 1960	17
C-3. Estimated Consumption of Petroleum Products by the Air Forces of Communist China, Mongolia, North Korea and North Vietnam, by Country, by Unit, and by Type of Product, 1960	19
C-4. Estimated Consumption of Petroleum Products by the Air Forces of the USSR, according to Description and Location of Unit and by Type of Product, 1961	20
C-5. Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites, by Country, by Unit, and by Type of Product, 1961	21
C-6. Estimated Consumption of Petroleum Products by the Air Forces of Communist China, Mongolia, North Korea and North Vietnam, by Country, by Unit, and by Type of Product, 1961	23

I. Introduction

The estimates of consumption of petroleum products by the military forces of the Sino-Soviet Bloc were developed independently by the appropriate intelligence components of the U.S. Departments of the Army, Navy, and Air Force. The particular responsibilities for the preparation of consumption estimates for similar consumers in the Sino-Soviet Bloc are as follows:

Army - Appendix A. Consumption of petroleum products by the ground forces of the Sino-Soviet Bloc.

Navy - Appendix B. Consumption of petroleum products by the naval forces, afloat and ashore, of the Sino-Soviet Bloc. In addition, estimates of consumption of petroleum products by the naval air forces of the Sino-Soviet Bloc are included in Appendix B.

Air Force - Appendix C. Consumption of petroleum products by the air forces (excluding Naval Air) of the Sino-Soviet Bloc. Included in such consumption estimates are requirements for petroleum products by civil aviation and aircraft engine testing.

The estimates presented in this report were derived from calculations based on probable numbers and types of equipment, the estimated use thereof, and the consumption of petroleum products per unit of time or distance. The margin of error is estimated to be plus or minus 15 percent for any and all of the estimates of consumption.

The term Sino-Soviet Bloc refers to the following countries: the USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, Communist China, Mongolia, North Korea, and North Vietnam. The term USSR and European Satellites refers to the USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania. The term Communist China and the Asiatic Satellites refers to Communist China, Mongolia, North Korea, and North Vietnam.

II. Estimates of Consumption*

The estimates of consumption of petroleum products by the Army, Navy, and Air Forces of the countries of the Sino-Soviet Bloc for the years 1960 and 1961 are summarized in Table 1. Estimates of consumption, according to country and to type of product are summarized in Table 2.

A detailed explanation of the assumptions made and methodology used to derive the estimates has been excluded from the appropriate appendixes since the assumptions and methodology are essentially the same as those that have appeared in previous reports.

* The estimates of consumption represent the best available information as of 1 January 1962.

S-E-C-R-E-T

Table 1

Estimated Consumption of Petroleum Products by the Military Forces
of the Sino-Soviet Bloc, by Force and by Country
1960-61

Consumer	Thousand Metric Tons												Total a/
	USSR	Albania	Bulgaria	Czechoslovakia	East Germany	Hungary	Poland	Rumania	Communist China	Mongolia	North Korea	North Vietnam	
<u>1960</u>													
Ground Forces	1,589.1	4.8	26.2	51.8	29.3	15.3	44.7	30.2	349.2	0	20.0	16.4	2,177.0
Naval Forces b/	2,537.9	8.6	26.4	0	31.3	0	48.9	29.9	247.1	0	18.4	6.3	2,954.9
Air Forces	7,314.7	5.5	54.6	156.8	32.5	14.1	180.1	38.4	394.6	1.2	120.5	0.9	8,313.8
Total a/	<u>11,441.7</u>	<u>18.9</u>	<u>107.2</u>	<u>208.6</u>	<u>93.1</u>	<u>29.4</u>	<u>273.7</u>	<u>98.5</u>	<u>990.9</u>	<u>1.2</u>	<u>158.9</u>	<u>23.6</u>	<u>13,445.7</u>
<u>1961</u>													
Ground Forces	1,462.8	4.8	28.8	56.8	32.4	15.5	50.9	33.2	349.2	0	20.0	16.4	2,070.8
Naval Forces b/	2,681.2	12.4	28.5	0	33.8	0	50.7	27.7	262.1	0	18.4	7.7	3,122.6
Air Forces	7,602.2	7.3	71.1	208.6	53.4	16.5	211.8	38.1	392.9	3.0	89.1	1.6	8,695.7
Total a/	<u>11,746.2</u>	<u>24.5</u>	<u>128.4</u>	<u>265.4</u>	<u>119.6</u>	<u>32.0</u>	<u>313.4</u>	<u>99.0</u>	<u>1,004.2</u>	<u>3.0</u>	<u>127.5</u>	<u>25.7</u>	<u>13,889.1</u>

a. Because of rounding, totals may not always equal the sum of components.

b. Includes consumption by Naval Air.

S-E-C-R-E-T

S-E-S-R-E-T

Table 2

Estimated Consumption of Petroleum Products by the Military Forces
of the Sino-Soviet Bloc, by Country and by Type of Product
1960-61

Year	Country	Thousand Metric Tons						Total a/
		Aviation Gasoline	Motor Gasoline	Jet Fuel	Diesel Fuel	Residual Fuel Oil	Lubricants	
1960	USSR b/	721.8	1,395.7	7,259.0	1,020.4	915.8	127.0	11,441.7
	Albania	0.2	4.2	4.9	9.0	0.1	0.5	16.9
	Bulgaria	4.7	27.1	47.3	20.2	5.9	2.0	107.2
	Czechoslovakia	21.1	14.0	130.1	40.4	0	3.0	208.6
	East Germany	6.0	22.6	24.9	33.7	3.6	2.2	93.1
	Hungary	5.0	7.1	8.1	7.6	0	1.5	29.4
	Poland	17.0	38.0	163.7	39.5	12.2	3.4	273.7
	Rumania	9.6	26.8	25.8	20.9	13.3	2.2	98.5
	Communist China	61.7	324.9	395.3	161.8	24.2	22.0	990.9
	Mongolia	1.2	0	0	0	0	0	1.2
	North Korea	7.2	21.0	108.8	20.2	0	1.6	158.9
	North Vietnam	0.8	15.6	0	6.2	0	0.9	23.6
	Total a/	<u>856.3</u>	<u>1,898.0</u>	<u>8,168.9</u>	<u>1,379.9</u>	<u>976.1</u>	<u>166.3</u>	<u>13,445.7</u>
1961	USSR b/	692.5	1,270.5	7,562.1	1,207.2	888.5	125.4	11,746.2
	Albania	0.7	4.5	6.1	11.0	1.6	0.6	24.5
	Bulgaria	5.9	29.2	62.7	22.5	5.9	2.2	128.4
	Czechoslovakia	24.2	15.0	178.4	44.4	0	3.3	265.4
	East Germany	11.8	24.8	39.8	36.9	3.6	2.7	119.6
	Hungary	5.6	7.1	10.0	7.7	0	1.7	32.0
	Poland	18.0	42.3	195.3	41.9	12.0	3.9	313.4
	Rumania	9.6	26.5	26.0	22.0	10.5	2.3	99.0
	Communist China	60.1	325.2	391.3	181.5	24.2	22.0	1,004.2
	Mongolia	3.0	0	0	0	0	0	3.0
	North Korea	4.8	20.3	80.8	19.9	0	1.5	127.5
	North Vietnam	1.6	15.6	0	7.5	0	1.0	25.7
	Total a/	<u>837.8</u>	<u>1,763.0</u>	<u>8,552.5</u>	<u>1,602.5</u>	<u>946.2</u>	<u>166.6</u>	<u>13,689.1</u>

a. Because of rounding, totals may not always equal the sum of components.

b. Includes consumption by forces outside national boundaries.

- 3 -

S-E-S-R-E-T

S-E-C-R-E-T

Appendix A

Table A-1

Estimated Consumption of Petroleum Products
by the Ground Forces of the Soviet Army
1960-61

		Metric Tons			
	Location of Units	Motor Gasoline	Diesel Fuel	Lubricants	Total
1960	USSR	1,079,428	190,990	63,537	1,333,955
	East Germany	161,536	40,688	10,099	212,323
	Hungary	21,402	7,339	1,434	30,175
	Poland	9,067	2,987	602	12,656
	Total	<u>1,271,433</u>	<u>242,004</u>	<u>75,672</u>	<u>1,589,109</u>
1961	USSR	962,934	187,218	57,524	1,207,676
	East Germany	161,536	40,688	10,099	212,323
	Hungary	21,402	7,339	1,434	30,175
	Poland	9,067	2,987	602	12,656
	Total	<u>1,154,939</u>	<u>238,232</u>	<u>69,659</u>	<u>1,462,830</u>

S-E-C-R-E-T

Table A-2

Estimated Consumption of Petroleum Products by the Ground Forces
of the Soviet Army, by Type of Unit
1960

Type of Unit	Motor Gasoline	Diesel Fuel	Lubricants	Metric Tons Total
<u>Line Divisions</u>				
39 Motorized Rifle	157,017	36,763	9,689	203,469
24 Tank	96,276	45,724	7,100	149,100
39 Mechanized	197,088	42,204	11,965	251,257
61 Rifle	210,461	23,250	11,686	245,397
9 Airborne	10,765	0	538	11,303
Total	<u>671,607</u>	<u>147,941</u>	<u>40,978</u>	<u>860,526</u>
<u>Non-Divisional Support</u>				
5 Gun Arty. Div.	6,675	3,042	486	10,203
7 Breakthrough Arty. Div.	26,307	3,698	1,500	31,505
5 Corps Troops	7,123	1,062	409	8,594
20 CA Army w/Rear	230,640	35,815	13,323	279,778
7 Tank Army w/Rear	47,838	8,111	2,797	58,746
Groups of Forces	26,700	3,405	1,506	31,611
Ministry of Defense	168,368	33,013	10,069	211,450
Total	<u>513,651</u>	<u>88,146</u>	<u>30,090</u>	<u>631,887</u>
<u>Miscellaneous</u>	86,175	5,917	4,604	96,696
Total Soviet Army Ground Forces	<u>1,271,433</u>	<u>242,004</u>	<u>75,672</u>	<u>1,589,109</u>

S-E-C-R-E-T

Table A-3

Estimated Consumption of Petroleum Products by the Ground Forces
of the Soviet Army, by Type of Unit
1961

Type of Unit	Motor Gasoline	Diesel Fuel	Lubricants	Metric tons
				Total
<u>Line Divisions</u>				
96 Motorized Rifle	225,461	55,038	14,025	294,524
26 Tank	104,298	48,446	7,637	160,381
31 Mechanized	156,660	33,556	9,511	199,727
26 Rifle	89,705	9,954	4,983	104,642
8 Airborne	9,569	0	478	10,047
<u>Total</u>	<u>585,693</u>	<u>146,994</u>	<u>36,634</u>	<u>769,321</u>
<u>Non-Divisional Support</u>				
5 Gun Arty. Div.	6,675	3,042	486	10,203
5 Breakthrough Arty. Div.	18,791	2,642	1,072	22,505
5 Corps Troops	7,123	1,062	409	8,594
18 CA Army w/Rear	207,576	32,464	12,002	252,042
7 Tank Army w/Rear	47,838	8,111	2,797	58,746
Groups of Forces	26,700	3,405	1,506	31,611
Ministry of Defense	168,368	33,013	10,069	211,450
<u>Total</u>	<u>483,071</u>	<u>83,739</u>	<u>28,341</u>	<u>595,151</u>
<u>Miscellaneous</u>	<u>86,175</u>	<u>7,499</u>	<u>4,684</u>	<u>98,358</u>
<u>Total Soviet Army Ground Forces</u>	<u>1,154,939</u>	<u>238,232</u>	<u>69,659</u>	<u>1,462,830</u>

S-E-C-R-E-T

S-E-C-R-E-T

Table A-4

Estimated Consumption of Motor Gasoline by the Ground Forces
of the Soviet Army, by Type of Unit
1960

Type of Unit	Transport Vehicles		Other Vehicles		Total	
	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)
<u>Line Divisions</u>						
39 Motorized Rifle	62,439	155,473	2,145	1,544	64,584	157,017
24 Tank	38,304	95,377	1,248	899	38,552	96,276
39 Mechanized	78,351	195,094	2,769	1,994	81,120	197,088
61 Rifle	83,570	208,089	3,294	2,372	86,864	210,461
9 Airborne	2,088	5,199	7,731	5,566	9,819	10,765
Total	<u>264,752</u>	<u>659,232</u>	<u>17,187</u>	<u>12,375</u>	<u>281,939</u>	<u>671,607</u>
<u>Non-Divisional Support*</u>						
5 Gun Arty. Div.	2,500	6,225	625	450	3,125	6,675
7 Breakthrough Arty. Div.	10,150	25,274	1,435	1,033	11,585	26,307
5 Corps Troops	1,320	3,300	4,778	3,823	6,098	7,123
20 CA Army w/Rear	88,000	219,120	16,000	11,520	104,000	230,640
7 Tank Army w/Rear	18,200	45,318	3,500	2,520	21,700	47,838
Groups of Forces	10,000	24,900	2,500	1,800	12,500	26,700
Ministry of Defense	41,524	103,135	81,541	65,233	123,065	168,368
Total	<u>171,694</u>	<u>427,272</u>	<u>110,379</u>	<u>86,379</u>	<u>282,073</u>	<u>513,651</u>
<u>Miscellaneous*</u>	N.A.	N.A.	N.A.	N.A.	N.A.	86,175
Total Soviet Army Ground Forces	<u>436,446</u>	<u>1,086,504</u>	<u>127,566</u>	<u>98,754</u>	<u>564,012</u>	<u>1,271,433</u>

* Radars, motor boats, outboard motors, motorcycles, etc.

S-E-C-R-E-T

S-E-C-R-E-T

Table A-5

Estimated Consumption of Motor Gasoline by the Ground Forces
of the Soviet Army, by Type of Unit
1961

Type of Unit	Transport Vehicles		Other Vehicles		Total	
	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)
Line Divisions						
56 Motorized Rifle	89,696	223,243	3,080	2,218	92,736	225,461
26 Tank	41,496	103,325	1,352	973	42,848	104,298
31 Mechanized	62,279	155,075	2,201	1,585	64,480	156,660
26 Rifle	35,620	88,694	1,404	1,011	37,024	89,705
8 Airborne	1,856	4,621	6,872	4,948	8,728	9,569
Total	230,907	574,958	14,909	10,735	245,816	585,693
Non-Divisional Support						
5 Gun Arty. Div.	2,500	6,225	625	450	3,125	6,675
5 Breakthrough Arty. Div.	7,250	18,053	1,025	738	8,275	18,791
5 Corps Troops	1,320	3,300	4,778	3,823	6,098	7,123
18 CA Army w/Rear	79,200	197,208	14,400	10,368	93,600	207,576
7 Tank Army w/Rear	18,200	45,318	3,500	2,520	21,700	47,838
Groups of Forces	10,000	24,900	2,500	1,800	12,500	26,700
Ministry of Defense	41,524	103,135	81,541	65,233	123,065	168,368
Total	159,994	398,139	108,369	84,932	268,363	483,071
Miscellaneous*	N.A.	N.A.	N.A.	N.A.	N.A.	86,175
Total Soviet Army Ground Forces	390,901	973,097	123,278	25,667	514,179	1,154,939

* Radars, motor boats, outboard motors, motorcycles, etc.

S-E-C-R-E-T

S-E-C-R-E-T

Table A-6

Estimated Consumption of Diesel Fuel by the Ground Forces
of the Soviet Army, by Type of Unit
1960

Type of Unit	Medium Tanks & Aslt Guns*		Heavy Tanks & Aslt Guns		TPM, Tank Retrievers**		Metric tons Total	
	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)
Line Divisions								
39 Motorized Rifle	9,243	28,308	390	2,401	2,418	6,054	12,051	36,763
24 Tank	6,648	20,356	3,528	22,724	1,056	2,644	11,232	45,724
39 Mechanized	5,772	17,675	3,939	24,236	117	293	9,828	42,204
61 Rifle	7,625	23,250	0	0	0	0	7,625	23,250
Total	29,288	89,589	7,857	49,361	3,591	8,991	40,736	147,941
Non-Divisional Support								
5 Gun Arty. Div.	0	0	0	0	1,215	3,042	1,215	3,042
7 Breakthrough Arty. Div.	0	0	0	0	1,477	3,698	1,477	3,698
5 Corps Troops	0	0	0	0	424	1,062	424	1,062
20 CA Army w/Rear	1,360	4,166	0	0	12,640	31,649	14,000	35,815
7 Tank Army w/Rear	532	1,626	0	0	2,590	6,485	3,122	8,111
Groups of Forces	0	0	0	0	1,360	3,405	1,360	3,405
Ministry of Defense	2,159	6,614	0	0	10,543	26,399	12,702	33,013
Total	4,051	12,406	0	0	30,249	75,740	34,300	88,146
Miscellaneous***	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	5,917
Total Soviet Army Ground Forces	33,339	101,995	7,857	49,361	33,840	84,731	75,036	242,004

* Includes light tanks.

** Includes mine clearing tanks, dozers, tracked APC's, etc.

*** Maintenance checks of tanks and assault guns in storage.

S-E-C-R-E-T

S-E-C-R-E-T

Table A-7

Estimated Consumption of Diesel Fuel by the Ground Forces
of the Soviet Army, by Type of Unit
1951

Type of Unit	Medium Tanks & Aslt Guns*		Heavy Tanks & Aslt Guns		TPM, Tank Retrievers**		Metric tons	
	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)	No. of Vehicles (Units)	Fuel Consumed (Metric tons)
<u>Line Divisions</u>								
56 Motorized Rifle	13,272	40,645	560	3,446	3,472	10,947	17,304	55,038
26 Tank	7,202	22,064	3,822	23,518	1,144	2,864	12,168	48,446
31 Mechanized	4,588	14,055	3,131	19,268	93	233	7,812	33,596
26 Rifle	3,250	9,954	0	0	0	0	3,250	9,954
Total	<u>28,312</u>	<u>86,718</u>	<u>7,513</u>	<u>46,232</u>	<u>4,709</u>	<u>14,044</u>	<u>40,534</u>	<u>146,904</u>
<u>Non-Divisional Support</u>								
5 Gun Arty. Div.	0	0	0	0	1,215	3,042	1,215	3,042
5 Breakthrough Arty. Div.	0	0	0	0	1,033	2,642	1,033	2,642
5 Corps Troops	0	0	0	0	424	1,062	424	1,062
18 CA Army w/Rear	1,224	3,754	0	0	11,566	28,710	12,650	32,464
7 Tank Army w/Rear	532	1,626	0	0	2,590	6,485	3,122	8,111
Groups of Forces	0	0	0	0	1,360	3,405	1,360	3,405
Ministry of Defense	2,159	6,614	0	0	10,543	26,399	12,702	33,013
Total	<u>3,915</u>	<u>11,994</u>	<u>0</u>	<u>0</u>	<u>28,653</u>	<u>71,745</u>	<u>32,568</u>	<u>83,739</u>
<u>Miscellaneous***</u>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	7,409
Total Soviet Army Ground Forces	<u>32,227</u>	<u>98,712</u>	<u>7,513</u>	<u>46,232</u>	<u>33,362</u>	<u>85,789</u>	<u>73,102</u>	<u>238,232</u>

* Includes light tanks.

** Includes mine clearing tanks, dozers, tracked APC's, etc.

*** Maintenance checks of tanks and assault guns in storage.

- 10 -

S-E-C-R-E-T

S-E-C-R-E-T

Table A-8

Estimated Consumption of Petroleum Products by the Ground Forces
of the European Satellites, by Country and by Type of Product
1960-61

Year	Country	Motor Gasoline	Diesel Fuel	Metric tons	
				Lubricants	Total
1960	Albania	2,213	2,274	308	4,795
	Bulgaria	20,196	4,800	1,254	26,250
	Czechoslovakia	10,508	38,868	2,420	51,796
	East Germany	20,482	7,400	1,396	29,278
	Hungary	6,555	7,350	1,419	15,324
	Poland	31,380	11,220	2,130	44,730
	Rumania	22,495	6,215	1,476	30,186
	Total	<u>113,829</u>	<u>78,127</u>	<u>10,403</u>	<u>202,359</u>
1961	Albania	2,213	2,274	339	4,826
	Bulgaria	22,215	5,250	1,379	28,844
	Czechoslovakia	11,339	42,755	2,662	56,756
	East Germany	22,250	8,136	1,756	32,142
	Hungary	6,555	7,410	1,560	15,525
	Poland	35,660	12,750	2,520	50,930
	Rumania	24,745	6,837	1,580	33,162
	Total	<u>125,257</u>	<u>85,414</u>	<u>11,796</u>	<u>222,467</u>

S-E-C-R-E-T

S-E-C-R-E-T

Table A-9

Estimated Consumption of Petroleum Products by the Ground Forces
of Communist China and the Asiatic Satellites,
by Country and by Type of Product
1960-61

Country	Motor Gasoline	Diesel Fuel	Lubricants	Metric tons
				Total
<u>1960</u>				
Communist China	308,000	24,500	16,700	349,200
North Korea	17,500	1,500	950	19,950
North Vietnam	15,400	175	780	16,355
Total	<u>340,900</u>	<u>26,175</u>	<u>18,430</u>	<u>385,505</u>
<u>1961</u>				
Communist China	308,000	24,500	16,700	349,200
North Korea	17,500	1,500	950	19,950
North Vietnam	15,400	175	780	16,355
Total	<u>340,900</u>	<u>26,175</u>	<u>18,430</u>	<u>385,505</u>

S-E-C-R-E-T

S-E-C-R-E-T

Appendix B

Table B-1

Estimated Consumption of Petroleum Products by the Naval Forces*
of the USSR and the European Satellites,
by Country and by Type of Product
1960-61

Year	Country	Metric tons						Total
		Aviation Gasoline Grades 100/95	Motor Gasoline	Jet Fuel	Diesel Fuel	Residual Fuel Oil	Lubricants	
1960	USSR							
	Baltic Fleet	10,000	20,100	253,000	227,930	253,300	9,450	773,780
	Northern Fleet	7,000	9,500	127,000	171,050	218,920	6,710	540,180
	Pacific Fleet	12,000	10,000	127,000	194,250	254,300	7,230	604,780
	Black Sea Fleet	6,000	13,000	252,000	152,040	190,250	5,850	619,140
	Total	<u>35,000</u>	<u>52,600</u>	<u>759,000</u>	<u>745,270</u>	<u>916,770**</u>	<u>29,240</u>	<u>2,537,880</u>
	Albania	0	1,700	0	6,570	100	220	8,590
	Bulgaria	0	5,200	0	14,690	5,920	610	26,420
	East Germany	0	1,200	0	25,860	3,620	620	31,300
	Poland	0	2,500	7,000	26,430	12,210	800	48,940
	Rumania	0	2,300	0	13,790	13,320	520	29,930
	Total	<u>0</u>	<u>12,900</u>	<u>7,000</u>	<u>87,340</u>	<u>35,170</u>	<u>2,770</u>	<u>145,180</u>
	Grand Total	<u>35,000</u>	<u>65,500</u>	<u>766,000</u>	<u>832,610</u>	<u>951,940</u>	<u>32,010</u>	<u>2,683,060</u>

S-E-C-R-E-T

Table B-1

Estimated Consumption of Petroleum Products by the Naval Forces*
of the USSR and the European Satellites,
by Country and by Type of Product
1960-61
(continued)

		Metric tons						
Year	Country	Aviation Gasoline Grades 100/95	Motor Gasoline	Jet Fuel	Diesel Fuel	Residual Fuel Oil	Lubricants	Total
1961	USSR							
	Baltic Fleet	9,000	19,600	200,000	310,660	237,340	10,020	786,620
	Northern Fleet	11,000	10,200	200,000	238,450	218,590	7,740	685,980
	Pacific Fleet	13,000	11,100	200,000	217,840	251,460	7,670	701,070
	Black Sea Fleet	8,000	13,200	125,000	174,100	181,150	6,090	507,540
	Total	<u>41,000</u>	<u>54,100</u>	<u>725,000</u>	<u>941,050</u>	<u>888,540**</u>	<u>31,520</u>	<u>2,681,210</u>
	Albania	0	1,900	0	8,620	1,600	280	12,400
	Bulgaria	0	5,440	0	16,500	5,920	660	28,520
	East Germany	0	1,240	0	28,280	3,620	660	33,800
	Poland	700	2,540	7,300	27,350	12,020	820	50,730
	Rumania	0	2,250	0	14,460	10,480	510	27,700
	Total	<u>700</u>	<u>13,370</u>	<u>7,300</u>	<u>95,210</u>	<u>33,640</u>	<u>2,930</u>	<u>153,150</u>
	Grand Total	<u>41,700</u>	<u>67,470</u>	<u>732,300</u>	<u>1,036,260</u>	<u>922,180</u>	<u>34,450</u>	<u>2,834,360</u>

* Including consumption by Naval Air.

** The decrease of the consumption of residual fuel oil in 1960-61 as compared to 1958-59 reflects the decommissioning of ships by the Navy.

S-E-C-R-E-T

Table B-2

Estimated Consumption of Petroleum Products by the Naval Forces*
of Communist China, North Korea and North Vietnam,
by Country and by Type of Product
1960-61

		Metric tons							
Year	Country	Aviation Gasoline		Motor Gasoline	Jet Fuel	Diesel Fuel	Residual Fuel Oil	Lubricants	Total
		Grades 100/95							
1960	Communist China	2,000		6,800	78,000	132,690	24,160	3,490	247,140
	North Korea	0		600	0	17,410	0	380	18,390
	North Vietnam	0		150	0	6,020	0	130	6,300
	Total	<u>2,000</u>		<u>7,550</u>	<u>78,000</u>	<u>156,120</u>	<u>24,160</u>	<u>4,000</u>	<u>271,830</u>
1961	Communist China	2,000		6,800	73,000	152,280	24,160	3,890	262,130
	North Korea	0		600	0	17,410	0	380	18,390
	North Vietnam	0		170	0	7,360	0	160	7,690
	Total	<u>2,000</u>		<u>7,570</u>	<u>73,000</u>	<u>177,050</u>	<u>24,160</u>	<u>4,430</u>	<u>288,210</u>

* Including consumption by Naval Air.

S-E-C-R-E-T

Appendix C

Table C-1

Estimated Consumption of Petroleum Products by the Air Forces of the USSR,
according to Description and Location of Unit and by Type of Product
1960

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Metric tons	
	Grades 100/95	Less than grade 95				Lubricants	Total
<u>USSR</u>							
Soviet Air Forces*	264,278	0	4,851,336	56,370	25,579	12,187	5,209,750
Training	44,768	20,951	225,789	3,186	1,458	1,525	297,677
MAP Testing	4,616	24,182	161,196	0	0	726	190,720
Civil Aviation	320,950	0	955,722	7,140	3,240	7,026	1,294,078
Total	<u>634,612</u>	<u>45,133</u>	<u>6,194,043</u>	<u>66,696</u>	<u>30,277</u>	<u>21,464</u>	<u>6,992,225</u>
<u>East Germany</u>							
Soviet Air Forces	5,698	0	146,537	3,332	1,456	330	157,353
<u>Hungary</u>							
Soviet Air Forces	739	0	81,008	1,142	739	142	83,770
<u>Poland</u>							
Soviet Air Forces	617	0	78,395	1,463	639	196	81,310
Total Soviet Air Forces	<u>641,666</u>	<u>45,133</u>	<u>6,499,983</u>	<u>72,633</u>	<u>33,111</u>	<u>22,132</u>	<u>7,314,658</u>

* Excludes consumption by Naval Air.

Table C-2

Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites
by Country, by Unit, and by Type of Product
1960

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Metric tons	
	Grades 100/95	Less than grade 95				Lubricants	Total
<u>Albania</u>							
Air Force	0	0	4,888	238	108	7	5,241
Civil Aviation	243	0	0	0	0	3	246
Total	<u>243</u>	<u>0</u>	<u>4,888</u>	<u>238</u>	<u>108</u>	<u>10</u>	<u>5,487</u>
<u>Bulgaria</u>							
Air Force	2,373	0	43,299	1,547	702	107	48,028
Training	147	30	3,999	59	27	7	4,269
Civil Aviation	2,164	0	0	59	27	35	2,305
Total	<u>4,704</u>	<u>30</u>	<u>47,298</u>	<u>1,665</u>	<u>756</u>	<u>149</u>	<u>54,602</u>
<u>Czechoslovakia</u>							
Air Force	4,986	0	73,743	3,094	1,404	196	83,423
Training	590	91	7,337	119	54	20	8,211
MAP Testing	1,458	4,350	19,375	0	0	126	25,309
Civil Aviation	9,590	0	29,681	238	108	203	39,820
Total	<u>16,624</u>	<u>4,441</u>	<u>130,136</u>	<u>3,451</u>	<u>1,566</u>	<u>545</u>	<u>156,763</u>

S-E-C-R-E-T

Table C-2

Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites
by Country, by Unit, and by Type of Product
1960

			(continued)		Metric tons		
Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Lubricants	Total
	Grades 100/95	Less than grade 95					
<u>East Germany</u>							
Air Force	617	0	22,963	833	378	46	24,837
Training	147	26	1,929	54	27	12	2,195
MAP Testing	364	0	0	0	0	5	369
Civil Aviation	4,862	0	0	78	36	78	5,054
Total	<u>5,990</u>	<u>26</u>	<u>24,892</u>	<u>965</u>	<u>441</u>	<u>141</u>	<u>32,455</u>
<u>Hungary</u>							
Air Force	434	0	7,140	357	162	18	8,111
Training	88	25	1,004	118	54	2	1,291
Civil Aviation	4,503	0	0	78	36	72	4,689
Total	<u>5,025</u>	<u>25</u>	<u>8,144</u>	<u>553</u>	<u>252</u>	<u>92</u>	<u>14,091</u>
<u>Poland</u>							
Air Forces*	4,475	0	116,990	3,749	1,701	262	127,177
Training	1,180	407	8,251	118	54	29	10,039
MAP Testing	0	2,180	31,484	0	0	86	33,750
Civil Aviation	8,721	0	0	214	97	141	9,173
Total	<u>14,376</u>	<u>2,587</u>	<u>156,725</u>	<u>4,081</u>	<u>1,852</u>	<u>518</u>	<u>180,139</u>
<u>Rumania</u>							
Air Force	2,896	0	23,330	1,785	810	84	28,905
Training	833	183	2,486	59	27	12	3,600
Civil Aviation	5,673	0	0	119	54	91	5,937
Total	<u>9,402</u>	<u>183</u>	<u>25,816</u>	<u>1,963</u>	<u>891</u>	<u>187</u>	<u>38,442</u>
Total European Satellites	<u>56,364</u>	<u>7,292</u>	<u>397,899</u>	<u>12,916</u>	<u>5,866</u>	<u>1,642</u>	<u>481,979</u>

* Excludes consumption by Naval Air.

S-E-C-R-E-T

Table C-3

Estimated Consumption of Petroleum Products by the Air Forces
of Communist China, Mongolia, North Korea and North Vietnam,
by Country, by Unit, and by Type of Product
1960

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Metric tons	
	Grades 100/95	Less than grade 95				Lubricants	Total
<u>China</u>							
Air Forces*	36,103	0	289,082	9,306	4,223	1,396	340,110
Training	2,108	411	10,745	472	216	62	14,014
MAP Testing	289	2,031	16,178	0	0	63	18,561
Civil Aviation	18,775	0	2,308	357	162	304	21,906
Total	<u>57,275</u>	<u>2,442</u>	<u>318,313</u>	<u>10,135</u>	<u>4,601</u>	<u>1,825</u>	<u>394,591</u>
<u>Mongolia</u>							
Civil Aviation	1,192	0	0	0	0	19	1,211
Total	<u>1,192</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>19</u>	<u>1,211</u>
<u>North Korea</u>							
Air Force	3,666	0	104,041	2,737	1,243	228	111,915
Training	1,247	62	4,715	59	27	25	6,135
Civil Aviation	2,273	0	0	78	36	36	2,423
Total	<u>7,186</u>	<u>62</u>	<u>108,756</u>	<u>2,874</u>	<u>1,306</u>	<u>289</u>	<u>120,473</u>
<u>North Vietnam</u>							
Air Force	795	0	0	59	27	12	893
Total	<u>795</u>	<u>0</u>	<u>0</u>	<u>59</u>	<u>27</u>	<u>12</u>	<u>893</u>
Total Communist China and Asiatic Satellites	<u>66,448</u>	<u>2,504</u>	<u>427,069</u>	<u>13,068</u>	<u>5,934</u>	<u>2,145</u>	<u>517,168</u>

* Excludes consumption by Naval Air.

S-E-C-R-E-T

Table C-4

Estimated Consumption of Petroleum Products by the Air Forces of the USSR,
according to Description and Location of Unit and by Type of Product
1961

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Metric tons	
	Grades 100/95	Less than grade 95				Lubricants	Total
<u>USSR</u>							
Soviet Air Forces*	213,091	0	4,616,596	44,863	20,358	13,454	4,908,362
Training	47,937	21,165	200,357	3,186	1,458	1,450	275,553
MAP Testing	3,777	17,056	192,364	0	0	649	213,846
Civil Aviation	336,232	0	1,476,308	7,854	3,564	7,851	1,831,809
Total	<u>601,037</u>	<u>38,221</u>	<u>6,485,625</u>	<u>55,903</u>	<u>25,380</u>	<u>23,404</u>	<u>7,229,570</u>
<u>East Germany</u>							
Soviet Air Forces	7,555	0	185,659	2,737	1,242	424	197,617
<u>Hungary</u>							
Soviet Air Forces	771	0	77,457	1,071	486	139	79,924
<u>Poland</u>							
Soviet Air Forces	3,923	0	88,397	1,785	810	207	95,122
Total Soviet Air Forces	<u>613,286</u>	<u>38,221</u>	<u>6,837,138</u>	<u>61,496</u>	<u>27,918</u>	<u>24,174</u>	<u>7,602,233</u>

* Excludes consumption by Naval Air.

S-E-C-R-E-T

S-E-C-R-E-T

Table C-5

Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites
by Country, by Unit, and by Type of Product
1961

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Lubricants	Metric tons Total
	Grades 100/95	Less than grade 95					
<u>Albania</u>							
Air Force	0	0	6,066	345	156	10	6,577
Civil Aviation	729	0	0	0	0	11	740
Total	<u>729</u>	<u>0</u>	<u>6,066</u>	<u>345</u>	<u>156</u>	<u>21</u>	<u>7,317</u>
<u>Bulgaria</u>							
Air Force	2,733	0	53,833	1,428	648	132	58,774
Training	147	30	7,337	59	27	7	7,607
Civil Aviation	2,990	0	1,539	79	36	51	4,695
Total	<u>5,870</u>	<u>30</u>	<u>62,709</u>	<u>1,566</u>	<u>711</u>	<u>190</u>	<u>71,076</u>
<u>Czechoslovakia</u>							
Air Force	6,580	0	125,632	3,332	1,512	315	137,371
Training	648	111	7,893	119	54	21	8,846
MAP Testing	729	4,282	11,366	0	0	97	16,474
Civil Aviation	11,828	0	33,529	238	108	245	45,948
Total	<u>19,785</u>	<u>4,393</u>	<u>178,420</u>	<u>3,689</u>	<u>1,674</u>	<u>678</u>	<u>208,639</u>
<u>East Germany</u>							
Air Force	1,929	0	35,521	833	378	89	38,750
Training	123	26	2,000	54	27	12	2,242
MAP Testing	0	0	0	0	0	0	0
Civil Aviation	9,725	0	2,308	156	72	165	12,426
Total	<u>11,777</u>	<u>26</u>	<u>39,829</u>	<u>1,043</u>	<u>477</u>	<u>266</u>	<u>53,418</u>

- 21 -

S-E-C-R-E-T

S-E-C-R-E-T

Table C-5

Estimated Consumption of Petroleum Products by the Air Forces of the European Satellites
by Country, by Unit, and by Type of Product
1961
(continued)

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Lubricants	Total
	Grades 100/95	Less than grade 95					
<u>Hungary</u>							
Air Force	385	0	7,434	357	162	18	8,356
Training	93	28	1,004	118	54	2	1,299
Civil Aviation	5,094	0	1,539	78	36	85	6,832
Total	<u>5,572</u>	<u>28</u>	<u>9,977</u>	<u>553</u>	<u>252</u>	<u>105</u>	<u>16,487</u>
<u>Poland</u>							
Air Forces*	3,569	0	157,614	3,749	1,701	316	166,949
Training	1,160	417	8,561	118	54	28	10,338
MAF Testing	0	2,547	21,797	0	0	77	24,421
Civil Aviation	9,628	0	0	197	90	155	10,070
Total	<u>14,357</u>	<u>2,964</u>	<u>187,972</u>	<u>4,064</u>	<u>1,845</u>	<u>576</u>	<u>211,778</u>
<u>Romania</u>							
Air Force	674	0	23,896	1,309	594	49	26,522
Training	409	136	2,152	59	27	10	2,793
Civil Aviation	8,413	0	0	158	72	136	8,779
Total	<u>9,496</u>	<u>136</u>	<u>26,048</u>	<u>1,526</u>	<u>693</u>	<u>195</u>	<u>38,094</u>
Total European Satellites	<u>67,586</u>	<u>7,577</u>	<u>511,021</u>	<u>12,786</u>	<u>5,808</u>	<u>2,031</u>	<u>606,809</u>

* Excludes consumption by Naval Air.

S-E-C-R-E-T

Table C-6

Estimated Consumption of Petroleum Products by the Air Forces
of Communist China, Mongolia, North Korea, and North Vietnam,
by Country, by Unit, and by Type of Product
1961

Description of and Location of Units	Aviation Gasoline		Jet Fuel	Motor Gasoline	Diesel Fuel	Metric tons	
	Grades 100/95	Less than grade 95				Lubricants	Total
<u>China</u>							
Air Forces*	33,251	0	299,498	9,580	4,347	949	347,625
Training	2,080	433	11,726	472	216	53	14,980
MAP Testing	520	1,927	4,773	0	0	47	7,272
Civil Aviation	19,914	0	2,308	357	162	324	23,065
Total	<u>55,765</u>	<u>2,360</u>	<u>318,310</u>	<u>10,409</u>	<u>4,725</u>	<u>1,373</u>	<u>392,942</u>
<u>Mongolia</u>							
Civil Aviation	2,990	0	0	0	0	48	3,038
Total	<u>2,990</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>48</u>	<u>3,038</u>
<u>North Korea</u>							
Air Force	2,266	0	77,034	2,142	972	160	82,574
Training	864	47	3,775	59	27	18	4,790
Civil Aviation	1,617	0	0	39	18	26	1,700
Total	<u>4,747</u>	<u>47</u>	<u>80,809</u>	<u>2,240</u>	<u>1,017</u>	<u>204</u>	<u>89,064</u>
<u>North Vietnam</u>							
Air Force	0	0	0	0	0	0	0
Civil Aviation	1,617	0	0	0	0	26	1,643
Total	<u>1,617</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>26</u>	<u>1,643</u>
Total Communist China and Asiatic Satellites	<u>65,119</u>	<u>2,407</u>	<u>399,119</u>	<u>12,649</u>	<u>5,742</u>	<u>1,651</u>	<u>486,687</u>

* Excludes consumption by Naval Air.